

L 36466-66 EWT(1) JM/GD  
AC NR: AT6022254

SOURCE CODE: UR/0000/66/000/000/0028/0033

AUTHOR: Petrov, D. M.; Pitelin, A. P.

ORG: none

TITLE: Mutual synchronization of reflex klystrons with strong coupling between the resonators

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966.  
Sektsiya elektroniki. Doklady. Moscow, 1966, 28-33

TOPIC TAGS: klystron, reflex klystron, ELECTRONIC CIRCUIT

ABSTRACT: An analysis was made of the conditions of mutual synchronization of several reflex klystrons by considering a system of n coupled resonators with n klystrons as a system of n coupled circuits with lumped parameters L, C, R. Several expressions are presented describing, under certain conditions, both the existence and the form of the oscillations and the law governing their onset in a system with n degrees of freedom. Equations were derived for determining the natural frequency of the system, and the voltage amplitude in the klystron gaps. These expressions were then used to study the problem of mutual synchronization, taking as an example a system of two klystrons coupled through an intermediate resonator. The results indicate that the steady-state operating conditions of a system of several klystrons with strong coupling

Card 1/2

ACC NR: AT6022255

SOURCE CODE: UR/0000/66/000/000/0048/0055

AUTHOR: Zyrin, S. S.; Karnaugh, O. I.; Petrov, D. M.

ORG: none

TITLE: Changing the frequency of a klystron oscillator with multiresonator oscillatory system

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya elektroniki. Doklady. Moscow, 1966, 48-55

TOPIC TAGS: klystron, multiresonator klystron, SHF oscillator

ABSTRACT: Two connected problems of frequency stability in a klystron oscillator are solved; on the basis of stability conditions, the oscillatory systems are analyzed, and design formulas for the multifrequency klystron oscillator are deduced. For the frequency-stability analysis, truncated equations describing a

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ACC NR: AT6022255

system with many degrees of freedom are used; supercritical couplings among n resonators (n "circuits" in an equivalent network) are assumed. The stability condition is described by:  $G_{1s} > 2G_{2w} \frac{K_s}{K_w}$ , where  $G_{1s}$ ,  $G_{2w}$ ,  $K_s$ ,  $K_w$  are the

conductances and feedback factors at spurious and working frequencies, respectively. Best practical results can be obtained from 3- and 5-resonator klystrons whose central natural frequency is used as a working frequency. Engineering formulas for a 3-resonator klystron are developed (tunable band, feedback factor, stabilization coefficient, optimal stationary conditions, output power). Orig. art. has: 4 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 09Apr66 / ORIG REF: 003

Card 2/2

PETROV, Dmitriy Mikhaylovich; BURYAK, V.S., ass., red.

[Design of a reflex klystron] Raschet otrazhatel'nogo kli-  
strona; posobie dlja kursovogo proektirovaniia. Moskva,  
Mosk. energ.in-t, 1962. 101 p. (MIRA 16:8)  
(Klystrons)

GAZARYAN, G.A.; YEFIMOV, B.A.; MAN'KOV, V.I.; PETROV, D.M.; VINOGRADOV,  
I.V., general-major, red.; YEMEL'YANOV, V.T., polkovnik, red.;  
KRASAVINA, A.M., tekhn.red.

[Reconnaissance in a rifle unit] Rezvedka v strelkovykh pod-  
razdeleniakh. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 125 p.  
(MIRA 14:5)

(Military reconnaissance)

PETROV, I. P., FILIPPOV, N. V., FILIPPOVA, T. I. and KERASHOV, V. A.

Powerful Gas Discharge in Chambers with Conducting walls. (Russian) (1975, 165 p. 177'') : pp. 1'-1''.

The Physics of Plasma Problems of Ionization, Thermal and Heat Radiation. (1975, English translation) Inst. Atm. Energetics, Acad. Sci. USSR, Novosibirsk, M. A. Leont'yev, V. V. Sazonov, V. V. Zhdanov.

Available in Library.

DOBROKHOPOV, E. I., IVANOV, D. P., MUKHOVATOV, V. S., KIRILLOV, V. D.,  
PETROV, D. P., RAZUMOVA, K. A., STRELKOV, V. S., SHEPELEV, M. N. and YAVLINSKIY,  
N.A.

"Investigation of Plasma Heating in Toroidal Chambers."

paper to be presented at the 2nd UN Intl. Conf. on the peaceful uses of Atomic  
Energy, Geneva, 1 - 12 Sep 57.

101677 11 V

PRUZNER, Saul L'vovich; KALININ, Georgiy Alekseyevich; SHERSHOV, Sergey Fedorovich; PETROV, D.V., redaktor; FRIDKIN, A.M., tekhnicheskij redaktor

[Economics and organization of power production] Ekonomika i organizatsiya energeticheskogo proizvodstva. Moskva, Gos. energ. izd-vo, 1956. 368 p.  
(MLRA 9:3)  
(Electric power)

PETROV, D.V., inzh.

Over-all development of railroad facilities is an important condition for the operative efficiency of locomotives. Zhel. dor. transp. 45 no.6:22-24 Je '63. (MIRA 16:7)

(Locomotives—Performance)

Category USSR Solid State Physics - Morphology of Crystals. Crystallization

E-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 26

Author : Petrov, D.Z., Bukhanova, A.A.

Title : New Fields of Application for The Phenomena Observed During Crystallization  
of Smelted Metals

Orig Pub : Aiyuminivye splavy. Lit'ye prokatka, kovka, shtampovka, termootrabortka. M.,  
Oborongiz, 1955, 65-83

Abstract : The method of obtaining specimens with a continuously-varying composition from one end of the specimen to the other is briefly discussed. The process is based on the difference in composition of the adjacent liquid and solid phases of the substance during crystallization. The specimens were obtained by drawing out (using the Chokhralskiy method) the crystal from the smelt. Using Au-Cu specimens, obtained at various drawing speeds, the hardness and the micro-and macro-structure were measured along the specimen, after which the specimen was cut into parts 2 -- 4 mm long, and its chemical composition was determined. Curves are given for the distribution of copper along the specimen for alloys containing 2, 3, and 4% copper, at various drawing speeds. Forced stirring of the melt reduced to one-sixth the time required to produce

Card : 1/2

PETR V, S.

"Operating streetcars with alternating current."

ELEKTROENERGIIA, Sofia, Bulgaria, Vol. 1), no. 4, Apr. 1969.

Monthly list of East Europe Accessions (EEAI), LC, Vol. 5, No. 4, Jun 59,  
Inclas

LETSOV, A.

AGRICULTURE

Periodical K-IZOGRIVNOE ZEMLEDELIYE. No. 10, Oct. 1958.

PEKOV, B. Organizational and economic evaluation of the rotation of crops on cooperative farms. p. 17.

Monthly List of East European Accessions (.....) W., Vol. 8, no. 3, March, 1954. uncl.

PETROV, E.A.; TALANTOV, A.V.

Investigating basic characteristics of burning of a homogeneous mixture in a turbulent flow. Izv.vys. i tez.zav.; av.tekh., 1 no.3;91-100 '87. (MIR 12:17)

1. Kazanavichy aviationsnyy institut. Kafedra teorii aviaticheskoye teley.

(Combustion)

FEIRCV, E. A., Card Tech. ci -- (1961) "Investigation of the basic characteristics of combustion of uniform mixtures in an open turbulent stream." Kavan', 1960. 16 pp including cover; (Ministry of Finance and Economic Planning, Kavan Av. No. 101 Inst); 160 copies; pri - not cover; .2L, 1960, 1961

PETROV, E.A.; TALANTOV, A.V.

Determining combusting characteristics in a turbulent flow.  
Izv. vys. ucheb. zav.; av.tekh. 2 no.1:89-94 '59.

(MIRA 12:3)

1.Kazanskiy aviatsionnyy institut, Kafedra teorii aviadvigateley.  
(Combustion)

Subject : USSR/Engineering

AID P-101

Card 1'1 Pub. 102 - 14 20

Author : Petrov, E. A.

Title : Protective Screen for Sharpeners

Periodical : Stan. i instr., T. 11, Ja 1956

Abstract : The author describes a very simple glass shield for sharpening machines designed by Solomin, S. G. Picture and drawings.

Institution : None

Submitted : No date

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

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CIA-RDP86-00513R001240420012-5"

— PETROV, E. G.

USSR / Cultivated Plants. Cereals.

Abs Jour : Ref Zhur - Biol., No 8, 1956, No 3471

Author : Petrov, E. G.; Grammatikov, S. V.

Issue : None

Title : Water Absorption of Winter Wheat in the Presence of Power Irrigation.

Orig, Pub : Vestn. s. kh. nauki, 1957, No 3, 93-99.

Abstract : Results of experiments conducted over three years with winter wheat under conditions prevalent in the district of Kostev, Irkutsk. The application of power spraying without vegetative irrigation has, on the average, increased the yield during the three years of experimentation by 10 centners per hectare. Power irrigation makes possible a deeper penetration of

ACC NRI AF6033555

SOURCE CODE: UR0181/66/008/010/29542957

AUTH: Peletinskii, S. V., et al.

SUBJ: Influence of thermal conductivity on high-frequency properties of ferromagnets

SOURC: Pizina tverogo tveri, v. , no. 2, 1970, "Solid"

KEYWORD: thermal conduction, ferromagnetic materials, uniaxial crystal, magnetic moment, magnetic susceptibility, entropy, spin wave, relaxation process, magnetic anisotropy, fluctuation

ABSTRACT: The influence of thermal conductivity on the damping of spin waves is calculated; the thermal conductivity is assumed to be constant, radiation is assumed to determine; the temperature dependence of the conductivity, radiation as a function of the entropy density, the entropy density, and the derivative of the latter with respect to the temperature. The thermal moment of the spin is assumed perpendicular to the unit vector of spin, which is in the orientation of the two makes the influence of the magnetic moment independent of the temperature. An equation is derived for the thermal conductivity in the presence of small perturbations of the magnetic moment from equilibrium. The influence of the thermal conductivity on the tensor of the high-frequency magnetic susceptibility is then calculated, followed by an evaluation of the influence of the thermal conductivity on the damping of the spin waves. A numerical estimate shows that the damping due to the thermal conductivity may turn out to be not small compared with the damping due to other relaxation pro-

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ACC NR: AP6033555

cesses. Orig. art. has: *U* formular.

SUB CODE: 20/ SUBM DATE: 20Feb66/ ORIG REF: 004/ ORIG REF: 001

Card 2/c

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CIA-RDP86-00513R001240420012-5

PTON, L. J.

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CIA-RDP86-00513R001240420012-5

1. THE U.S. GOVERNMENT

INTEREST IN INVESTIGATING THE ASSASSINATION OF PRESIDENT KENNEDY  
HAS BEEN SUSPENDED. THIS IS A TEMPORARY SUSPENSION.

2. THE U.S. GOVERNMENT

INTEREST IN INVESTIGATING THE ASSASSINATION OF PRESIDENT KENNEDY

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

PETROV, E. G., CHEPNYKH, A. A.

USSR (606)

Irrigation

Local snow water irrigation of forest belts. Gidr. i mel. 4 no. 7, 1952

Monthly List of Russian Acquisitions, Library of Congress, November 1952. UNCLASIFIED.

ACC NR: AP7000663

SOURCE CO. #: UR/CLP/KM/... DATE: 07/19/1979

AUTHOR: Petrov, E. G.

ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskiy Inst. im. M. V. Фрунзе) (UkrSSR)

TITLE: Effect of heat conductivity on the high-frequency properties of antiferromagnetics

SOURCE: Fizika metallov i metallovedeniya, v. 41, no. 6, 1966, 601 -

TOPIC NAME: antiferromagnetic material, antiferromagnetism, magnetic susceptibility, heat conductivity

ABSTRACT: The effect of heat conductivity on the high-frequency properties of uniaxial antiferromagnetic material with first-order anisotropies was investigated. Approximate expressions for the high-frequency magnetic susceptibility taking into account the heat conductivity coefficients were derived. The derived relation extends that of the well-known Dzyaloshinsky and V. Tsukernik (ZhETF, 1961, 41, 247). The following expression for the effect of heat conductivity on the high-frequency magnetic susceptibility was derived:

SLC: 55.4.4

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ACC NR: AP7000653

$$\chi_{xx} = \begin{pmatrix} I_{xx} & I_{xy} \\ I_{yx} & I_{yy} \end{pmatrix},$$

where

$$I_{xx} = \frac{2\Omega^2 \cos^2 \theta}{\omega_0^2 - \omega^2} + I_{xx}^{(0)} = I_{xx}^{(0)} - \frac{2\alpha_0 M_0 \omega \cos \theta}{\omega_0^2 - \omega^2},$$

$$I_{yy} = \omega_0^2 + (\alpha + \alpha_0) \omega^2 - \frac{2\Omega^2}{\omega_0^2 - \omega^2}$$

$$I_{xy} = \frac{-\alpha_0 M_0 \omega^2 (\alpha + \alpha_0) k^2 \sin^2 \theta}{\omega_0^2 - \omega^2}$$

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ACC NR: AP7000653

and

$$\Omega_0^2 = (gM_0)^2 (2\delta + (a - a_{12}) k^2) [(\omega \delta + (a + a_{12}) k^2) \cos^2 \theta - \\ - i\beta - (a - a_{12}) k^2] \sin^2 \theta],$$

$$\Omega_1^2 = (gM_0)^2 (\omega \delta - (a + a_{12}) k^2),$$

$$\Omega_2^2 = (gM_0)^2 (a - a_{12}) k^2 \left[ -1 + a_{12} k^2 \cos^2 \theta + \left( \frac{\omega^2}{k^2} - (a + a_{12}) k^2 - \right. \right. \\ \left. \left. - \frac{\beta}{k^2} + \frac{1}{k^2 \omega^2} \right) \sin^2 \theta \right].$$

where  $\beta$  is the anisotropy constant,  $\propto_{12}$ ,  $\propto_{11}$  - constants characterizing the exchange energy of the antiferromagnetic,  $\delta$  - a constant related to the exchange interaction of homogeneously magnetized sublattices,  $M_0$  - equilibrium magnetic moment,  $g$  - gyromagnetic ratio,  $a$  - an integer,  $k$  - heat conductivity of medium, and  $\cos \theta$

$$\cos \theta_1 = -\frac{H_0}{H_1}, \quad \theta_1 = -\theta_2.$$

Card 3/4

ACC NR: AM7000653

where  $H_0$  is the applied magnetic field and  $\alpha_0 = 4.2 \times 10^{-3} / H_0$ . It is shown that the spin wave extinction coefficient increases as a result of heat conductivity as the cube of the absolute temperature  $T$ . The author thanks S. V. Leont'evskiy for his kind attention. Orig. art. has: 16 equations.

SUB CODE: 20/ SUBM DATE: 22Mar66/ FILE REF: 001/ CTR REF: 001

Card 4/4

PETROW, Emil K., inzh., ml. n. sutr.

Selecting the rated output of electric-power transformers for  
electric railroads. Tekhnika Bulg 11 no.5:180-181 '62.

1. Nauchnoizsledovatelski institut po transporta.

ACC NR: AP7006034

SOURCE CODE: UR/0288/66/000/002/0084/0097

GRAROVETSKIY G. V., SEMENOV V. V. AND PETROV E. L., Novosibirsk Institute of Electrical Engineering (Novosibirskiy elektrotokhnicheskiy institut)

"Mathematical Analysis of the Rectifier-Type Frequency Converter"

Novosibirsk, Izvestiya Sibirskego Otdeleniya Akademii Nauk SSSR (News of the Siberian Division of the Academy of Sciences SSSR), No 6, 1966, pp 84-97.

**Abstract:** The article deals with the rectifier-type frequency converter; this is a device which finds increasing application in converting power-line frequency to 500-1000 Hz. The system described here has a stiff external characteristic and produces a nearly sinusoidal output voltage; it operates over a wide range of loads and that includes no-load, which is impossible with other known systems, as well as regeneration i.e. pumping energy back into the line. The analysis begins with the no-load condition, whereby both the single-phase and the three-phase versions are considered; the formulae are later modified to account for the presence of a resistive and inductive load. Calculations are made by the method of harmonic components and, thus, the distortion of the output waveform is shown to be insignificant even at no-load; consequently, it is not necessary to consider the higher harmonics in these calculations. In addition, the plate current and the peak-inverse-voltage are determined, also the recovering time of the rectifier; namely, the time it takes for the rectifier to resume control.

Card 1/2

UDC: 621.314.26  
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ACC NR: AP7006034

} after the plate current has ceased to flow. The formulae established here can  
be useful in designing individual components of this converter circuit, whether  
the latter employs a switch or a commutator (thyatrons, thyristors). Orig. art.  
has: 5 figures and 40 formulas. [JPIS: 39,568]

TOPIC TAGS: frequency converter, electronic rectifier

SUB CODE: 09 / SUBM DATE: 01Jul65 / ORIG REF: 004

Card 2/2

PETROV; E. M.

4

4841. Analysis of Intermediate Frequency on Semi-Conductor Triodes. Analiza usiliteli promezhutochnoi chastoty na poluprovodnikovykh triodakh. (Russian.) E. I. Pummer and E. M. Petrov. Radiotekhnika, v. 10, no. 12, Dec. 1955, p. 21-32.

Includes table, graphs, diagrams. 8 ref.

PH

PETROV, E. M.

4

621.375.420.029.54

✓ 4334. ANALYSIS OF TRANSISTOR INTERMEDIATE-

FREQUENCY AMPLIFIERS. E.Ya.Pumpur and E.M.Petrov,  
Radiotekhnika, Vol. 10, No. 12, 21-32 (1955). In Russian.

Point-contact triodes are considered where parasitic capacitances are neglected and where current gain is supposed independent of frequency. The use of a tapped single-tuned circuit as a coupling element is examined and it is concluded that complete matching in input and output impedances is never possible. With a band-pass filter, symmetrical matching is possible and expressions are deduced for two forms of coupling which enable inductances and coupling factor to be determined. For responses that are 3 dB down at 10 kc/s, the loaded-Q and adjacent selectivity of 4 coupling arrangements between a pair of given transistors are calculated for I.F.'s of 110 and 405 kc/s.

S.C.Dunn

(2) (3)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

PETROV, E. M.

"Crimean Heavy-Fruited Mountain Ash, *Nature*, Vol. 210 (No. 5077), p. 117.  
Sov. of the AS USSR News, No. 13, 1967.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

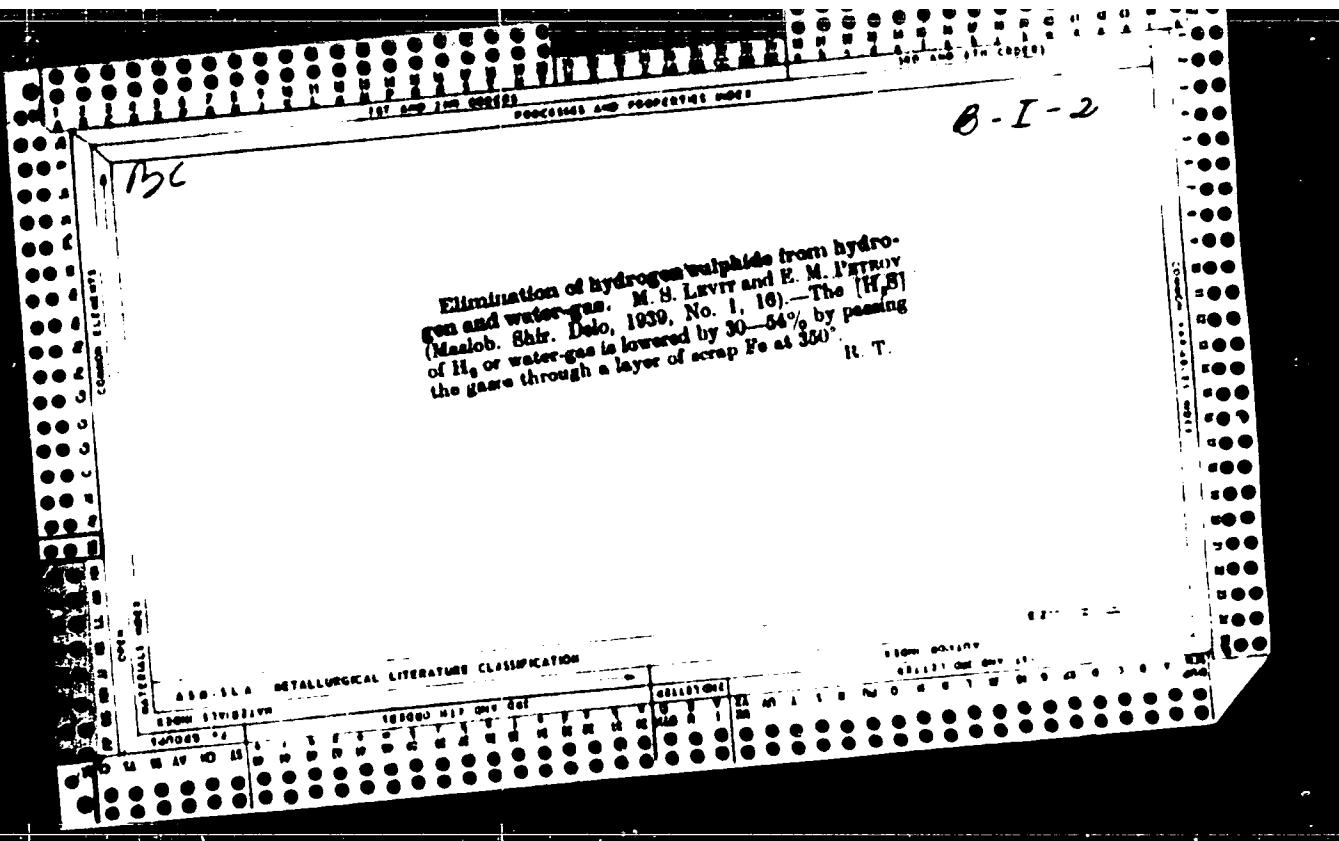
Removal of hydrogen sulfide from hydrogen and water  
gas M. S. Levit and F. M. Petrov *Mashinostroenie*  
Zhurav. Date 15, No. 1, 16 1930 A no. of neg. exptl  
results are reported Chas Blank

ASA SLA METALLURGICAL LITERATURE CLASSIFICATION

16029

CLASS. SYMBOLS  
EXCLUSIVELY AND ONLY AS

Installation for producing hydrogen by the contact method. A. P. LOSENKAY  
and E. M. VENIGOV. Russ. 20,098, Mar. 30, 1931. An app. for prep. H from water gas  
consists of 2 units, i.e., a contact furnace, a gas preheater and a steam superheater.  
Heat exchange is effected by a connection of the lower part of the furnace with the  
upper part of the preheater while combustion gases from the furnace are passed with the  
steam superheater and the steam superheated steam is passed from the upper part of the  
superheater into the upper part of the contact furnace.



STARIK, I.YE., PETROV, E.R.

Some problems of the geochemistry of radioactive isotopes.

Report to be submitted for the Chemistry of the Earth Crust, Geochemical Conference, Moscow, USSR, 14-19 Mar 63

CHATEVSKY, A.I.; RIKOV, P.V.; VASIL'EV, M.V.

Equilibrium in the system diphenylbenzene - benzene -  
diphenyl and naphthalene - benzene - benzene - diphenyl  
SSSR Izd. Akad. Nauk SSSR, No. 21, p. 31-34, 1956.

I. Fizik - khimicheskiy institut im. L.D. Kurn; vuz. Submitted  
September 4, 1954.

PETROW, F. V. - T. N. RYBYK, A. I.

Mechanism of the solvation of a sodium ion with some ethers  
during the formation of anion radicals. Teoret. i akspel.  
khim. 1 no.3:347-351 My-Je '65. (MIRA 18 9,

I. Fiziko-khimicheskiy institut imeni I.Ya. Karpova, Moscow.

SLOVOKHOTOVA, T.A.; BALANDIN, A.A.; PETROV, E.S.; SHOLIN, A.F.

Catalytic hydrogenolysis of ethane and cyclohexane on Ni-Kieselguhr  
catalysts. Izv. AN SSSR. Ser. khim. no.5:785-792 '65. (MIRA 18:6).

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.

PETROV, E. S.; YAKOVLEVA, Ye. A.; SHATENSHTEYN, A. I.

Comparison of the effect of solvents on the formation of  
anion radicals and carbanions. Zhur. ob. khim. 33 no. 1: 107-  
112 '63. (MIRA 16:1)

1. Fiziko-khimicheskiy institut imeni L. Ya. Karpova.

(Carbanions) (Radicals(Chemistry))  
(Solvents)

PETROV, E.S.; RELOUSOVA, M.I.; SHATENSHTEYN, A.I.

Formation of lithium and sodium blue solutions in certain  
ethers. Zhur. ob. khim. 34 no. 7:2465 Jl '64 (MIRA 17:8)

1. Fiziko-khimicheskly Institut imeni L. Ya. Karpova.

S/079/63/033/001/008/023  
D205/D307

AUTHORS: Petrov, E. S., Yakovleva, Ye. A. and Shatenshteyn, A. I.

TITLE: Comparison of the effect of solvents on the formation  
of anion radicals and carbanions

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 1, 1963, 107-112

TEXT: A development of an earlier study (DAN SSSR, 1963, 645 (1,60)) concerned with the effect of a series of ether solvents on the equilibrium in the system toluene-alkali metal. In the present work the authors determined the effects of the diethyl ether of diethylene glycol (I), dimethyl ether of ethylene glycol (II), tetrahydrofuran (III), and diethyl ether of ethylene glycol (IV) on the equilibrium of the formation of (1) anion radicals during the reaction of diphenyl with  $\text{CH}_3\text{OK}$  and  $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OK}$  [Abstracter's note:

I is also given as the dimethyl ether of diethylene glycol. 7. Purified materials were used. The equilibria were weaned spectrophotometrically, using the C $\phi$ -4 (SF-4) instrument. The optical densi-

Card 1/2

Comparison of the ...

S, 07-2, 23, 33, 001, 002, 023  
S205, S307

ties at 625  $\mu\text{m}$  were compared to determine the concentration of diphenyl anion radicals, C, finding that for 0.0028M solutions of diphenyl the relative values of C were:  $C_I = 100$ ,  $C_{III} = 40$ , and  $C_{IV} = 10$  (taking  $C_{II}$  as 100). In the fluorene-alcoholate systems, measurements of the optical density at 465  $\mu\text{m}$  showed that the relative concentrations  $C'$ , referred to  $C_{II} = 100$ , were: (a) for  $\text{CH}_3\text{OK}$ :  $C'_{III} = 14$ ,  $C'_{IV} = 12$ ; (b) for  $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OK}$ :  $C'_{III} = 50$ ,  $C'_{IV} = 25$ . It is considered that solvation of the organo-(alkali metal) compound (case (1)) and of the alcoholates (case (2)) plays an important part in these reactions; the solvating tendency of the 4 ethers tested decreased in the order: I > II > III > IV. There are 2 figures and 4 tables.

ASSOCIATION: Fiziko-khimicheskiy institut imeni L. Ya. Karpova  
(Physico-Chemical Institute imeni L. Ya. Karpov)

SUBMITTED: February 26, 1962

Card 2/2

SHATENSHTEYN, A.I.; YAKOVLEVA, Ye.A.; PETROV, E.S.

Effect of solvents on the formation of anion radicals, carbanions,  
and on hydrogen exchange between hydrocarbons. Znur. ob. khim.  
32 no.4:1350-1351 Ap '62. (MIRA 1<:4)  
(Radicals (Chemistry)) (Solvents) (Deuterium)

SHATENSHTEIN, A.I.; YAKOVLEVA, Ye.A.; PETROV, E.S.

Initiation of polymerization with solid potassium amide and potassium alcoholate in dimethoxyethane. Dokl. AN SSSR 136 no.4:882-885  
(MIRA 14:1)  
F '61.

Fiziko-khimicheskiy institut imeni L.Ya. Karpova. Predstavлено  
академиком V.A. Karginym.  
(Polymerization) (Potassium amide) (Potassium alcoholates)

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CIA-RDP86-00513R001240420012-5

ZENTRAL-TV, U.S.; ZENTRAL, U.S.; ZENTRAL-TV, U.S.

Electrical powerplants, hydroelectric powerplants,  
and other hydroelectric powerplants, hydroelectric powerplants  
S-0 104

U. P. (U.S.-Korea) - U.S. - Korea - U.S. - Korea - U.S.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

S/020/61/136/004, 024/026  
B628/B660

AUTHORS: Shatenshteyn, A. I., Yakovleva, Ye. A., and Petrov, E. S.

TITLE: Initiation of Polymerization With Solid Potassium Amide and an Alcoholeate in Dimethoxy Ethane

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 156, No. 4,  
pp. 882-885

TEXT: The present paper deals with anion polymerization on the basis of anion radical formation. Earlier experiments (Ref. 1) of polymerization with potassium amide in liquid ammonia gave rise to polymers with molecular weight 2000-4000. The heterogeneous catalysis of styrene polymerization with solid potassium amide gave rise to polymers with a molecular weight of several millions. The initiation of polymerization with an alcoholeate in dimethoxy ethane took place on the strength of considerations on the effect of solvents on the catalytic activity of the alcoholeate. This effect may be regarded as an increase of the electron donor ability of the alcoholeate. Alcoholeate in dimethoxy ethane also

Card 1/4

Initiation of Polymerization With Solid  
Potassium Amide and an Alcoholate in  
Dimethoxy Ethane

S, 020, 61, 136 004 024 026  
3028, 3060

accelerates the polymerization of vinyl monomers.  $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OK}$  gives rise to a rapid polymerization of methyl methacrylate. The styrene polymerization also took place when mixing styrene with solutions or suspensions of  $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OK}$  or  $\text{CH}_3\text{OK}$ . Fig. 1 shows curves of light absorption for various concentrations of the solution. The position of the maxima corresponds to the one occurring in the reaction of fluorines with KCH in liquid ammonia. ( $\lambda = 365, 465, 480 \text{ m}\mu$ ). Less acid hydrocarbons, such as triphenyl methane, are not ionized under these conditions. The action of  $\text{CH}_3\text{OCH}_2\text{CH}_2\text{OK}$  leads in the case of fluorines to ionization and formation of carbon ions. In the polymerization of styrene at room temperature a polymer was obtained, which was weakly soluble in benzene. The intrinsic viscosities  $\eta$  in toluene ranged between 5.1 and 8.8. In polymers of methyl methacrylate, in chloroform and methanol at  $25^\circ$ ,  $\eta$  amounted to 3.2 and 2.2. The experiments involved the use of 2 ml dimethoxy ethane with 0.02 ml alcohol, 0.01-0.1 g metallic potassium, and 0.1-3 ml monomer. The maximum of light absorption for styrene polymers ranged between 170 and

Card 2/4

Initiation of Polymerization With Solid  
Potassium Amide and an Alcoholate in  
Dimethoxy Ethane

S/020/61/136/004/024/026  
B028/B060

530 m $\mu$ . The styrene polymerization was dependent upon the various experimental conditions (3-30%). Ye. A. Radinovich and Yu. P. Vyrskiy participated in the work. There are 2 figures and 16 references: 9 Soviet, 1 US, and 7 British.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov )

PRESENTED: August 28, 1960, by V. A. Kargin, Academician

SUBMITTED: July 22, 1960

Card 3/4

S/020/61/136/004/024/026  
B028/B060

Legend to 1: a) absorption.

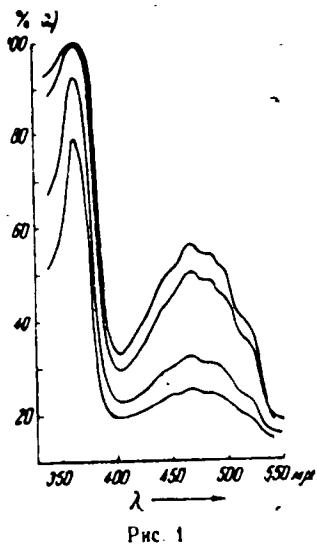


Рис. 1

Card 4/4

SHATENSHTEYN, A.I.; PETROV, E.S.; BELOUSOVA, M.I.; YANCOVA, K.G.;  
YAKOVLEVA, Ye.A.

Influence of the ether structure on the solvation effect when  
sodium biphenyl and sodium naphthalene are formed. Dokl. AN  
SSSR 151 no.2:353-356 Jl '63. 'MIRA 16:?"

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno  
akademikom V.A.Karginym.  
(Ethers) (Sodium organic compounds) (Solvation)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

ANZHEVSKIY PETROV E.S. SAVDOKTEG A.I.

THE POLARIS GROUP OF COMPANIES IS LOCATED IN THE SETEE  
BALKANS. THE COMPANY IS INVOLVED IN THE PRODUCTION OF H2OD.  
ZAGREB, CROATIA. (MIRA 142)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

5383/

S/020/60/131/03/12/01  
B004/B056 P2276

AUTHORS: Yakovleva, Ye. A., Petrov, E. S., Solodovnikov, S. P.,  
Voyevodskiy, V. V., Corresponding Member AS USSR.  
Shatensteyn, A. I.

TITLE: The Influence of Metal and Solvent Upon the Formation of  
Aromatic Anion Radicals as Initiators of Polymerization

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 137, No. 5,  
pp. 645 - 648

TEXT: In the introduction, the authors give a survey of publications concerning investigations of anion radicals (AR) formed by the transition of an electron from alkali metal to an organic molecule. They then describe their own investigations of the formation of the AR of benzene and toluene. The following solvents were used: 1,2-dimethoxyethane (DME), 1,2-methoxy-ethoxy-ethane (MEE), 1,2-diethoxyethane (DEE), tetrahydro-furane (THF), and 1,3-dioxane (DO). The AR were detected by means of electron paramagnetic resonance. The frozen solvent with the aromatic compound was placed in an evacuated ampoule, on the walls of which potassium

Card 1/3

4

The Influence of Metal and Solvent Upon the  
Formation of Aromatic Anion Radicals as Initiators S.020.50 \*\*\* C.1.1.  
of Polymerization B004 B056 82276

had precipitated. Experiments carried out with benzene (0.4 mole in 1 liter solution at -30°C) with an addition of K and DME produced an AR concentration that was 4 to 5 times higher than with DEE. With Na and DEE the AR concentration was lower by at least 2 orders of magnitude. Parallel experiments carried out with Li and Na in DEE at -70°C gave a considerably higher AR concentration for Li. Experiments with toluene supplied the data given in Table 1. The relative concentration of AR was determined, the AR concentration in DME being set equal to 100. The experimental results led to the following conclusions: 1) Benzene forms AR with Li, Na, and K. Potassium-anion radicals formed in all solvents used; 2) substitution of the methyl group of ether by the ethyl group decreased the stability of AR as a result of steric hindrance. Stability decreases in the following order: DME, MEE, DEE. 3) The sodium compound of aromatic hydrocarbon does not form so easily as the K- and Li-compounds. - The initiation of the polymerization of styrene was investigated by means of benzene potassium in DME, MEE, and DEE. The electron paramagnetic resonance spectrum of these solutions showed a narrow singlet (Fig. 1). In the initiation of the polymerization by means of a solution of K in DME without benzene

Card 2/3

X

The Influence of Metal and Solvent Upon the  
Formation of Aromatic Anion Radicals as Initiators S/025/80, 115, 116  
of Polymerization B004/B056 R2276

(-50 - -80°C) a quintuplet (Fig. 2) was observed. This was explained by transition of an electron into the aromatic ring of polystyrene. The polymers had a molecular weight of from 350,000 to 600,000. The authors are continuing their investigations. They thank Ye. A. Kovrzhnykh for his help rendered. A. K. Rusanov for the spectrum analysis of potassium, which was carried out in his laboratory, and Yu. P. Vyrskiy for determining the molecular weight of the polymers. There are 2 figures, 1 table, and 16 references: 4 Soviet, 9 American, 2 German, and 1 Japanese

ASSOCIATION: Fiziko-khimicheskiy institut im L. Ya. Karpova (Physico-chemical Institute im. L. Ya. Karpova) Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

SUBMITTED: March 27, 1960

4

Card 3/3

YAKOVLEVA, Ye.A.; PETROV, E.S.; SOLODOVNIKOV, S.P.; VOYEVODSKIY, V.V.;  
SHATENSHTEYN, A.I.

Influence of the metal and the solvent on the formation of  
aromatic anion radicals initiating polymerization. Dokl.AN  
SSSR 133 no.3:645-648 Jl '60. (MIRA 13:7)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova i  
Institut khimicheskoy fiziki Akademii nauk SSSR. 2. Chlen-  
korrespondent AN SSSR (for Voyevodskiy).  
(Radicals(Chemistry)) (Polymerization)

PETROV, E.V.

Determining the efficiency of universal work lift trucks. Avt.prom.  
31 no.7:1-4 Ju '65. (MFA 18:8)

1. Moskovskoye vysokoye tekhnicheskoye zashchitnoye Imeni Baumana.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

100%  
100%

100%

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

PETROV, E.V.

Efficient design of the cathode arrangement in electrolytic baths.  
TSvet. met. 33 no.10:52-55 O '60. (MIRA 10:10)

1. Bogoslovskiy aluminievyy zavod.  
(Aluminum--Electrometallurgy)

MINTCHEV, Dinko k. t. n.; IORLANOV, Dimcho, inzh.; IORDANOV, Evtoshev,  
inzh.; PETKOV, Evstatii, inzh.

Automatic control and synchronization of the wash-and-dry machine  
drive in the 8 March State Industrial Enterprise, Sofia.  
Tekstilna prom. no. 614-27 163.

BUBLIK, Yu.I.; YERMAKOV, S.M., YEFIMENKO, B.A.; ZOLOTUKHIN, V.G.; PETROV, E.Ye.

Gamma-ray dose from a unidirectional source near the soil-air interface.  
Atom. energ. 18 no.6:623-629 Ja '65.  
(MIRA 131)

YERMIKOV, S.M., PETROV, F.Ye.

Penetration of gamma quanta through shielding barriers. Atom. energ.  
19 no.1, 71-73 Jl '65.  
(MIR 18, 7)

YERMAKOV, S.M.; ZOLOTUKHIN, V.G.; PETROV, E.Ye.

Calculating the passage of neutrons through a plane polyethylene  
layer. Atom. energ. 15 no.3:253-255 S '63. (MIRA 16:1C)

(Neutrons--Capture) (Shielding (Radiation))

L 6469-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m) WW/DM  
ACCESSION NR: AP5019817

UR/0089/65/019/001/0071/0073  
539.122:539.121.72

36

35

5

AUTHOR: Yermakov, S. M.; Petrov, E. Ye.

TITLE: Concerning the passage of  $\gamma$  quanta through shielding barriers

SOURCE: Atomnaya energiya, v. 19, no. 1, 1965, 71-73

TOPIC TAGS: reactor shielding, water, lead, Gamma radiation, Gamma scattering

ABSTRACT: The authors describe an effect connected with the passage of  $\gamma$  quanta through a flat shield consisting of two components, a primary layer of water and a secondary layer of lead. The effect consists in the fact that in the case when hard gammas are incident on the shield at large inclinations to the normal direction, an increase in the thickness of the water may lead to an increase in the intensity of radiation transmitted through the shield. The reasons for the phenomenon are briefly explained. The effect was observed during the course of an analysis of Monte Carlo calculations of the passage of  $\gamma$  rays through multilayer shielding barriers, in which account was taken of Compton scattering and absorption due to the photoeffect and to pair production. The calculations were made for a multidirectional monoenergetic radiation source. The effect takes place at angles exceeding 82° and energies above 6 Mev. The variation of the radiation characteristic with the thickness of the water layer is briefly discussed. "The

Card 1/2

L 6469-66

ACCESSION NR: AP5019817

authors thank N. F. Kham'yanov for the electronic-computer calculations." Orig.  
art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 13Aug64

ENCL: 00

SUB CODE: NP

NR REF Sov: 000

OTHER: 000

BC  
Card 2/2

S/869/62/000/000/0,2/0\*2  
B102/2186

AUTHORS: Petrov, S. Ie., Urachev, ... N.

TITLE: Spatial and angular distributions of neutrons emitted from a point source when scattering anisotropy is taken into account

SEARCHER: Teoriya i metody rascheta polnogo reaktorov, st. nauchno-tehnichesk. sov. d. o. J. I. Kurchatova. Myscow, 1961, p. 58 - 71

TEXT: Attempts are made to determine sufficiently exact neutron distributions at various distances from the source, including, distances greater than the mean free path. In order to eliminate the  $\frac{1}{r^2}$  singularity,

all neutrons that have not suffered even one collision are eliminated, i.e. that the source consists of neutrons that collided once. The problem is treated in a similar way to the isotropic case. The singularities of the neutron distribution after the first collision are treated separately from those after the second since the distribution function  $\psi(r,n)$  is assumed to be the sum of the functions representing these singularities (subscripts 1,2) and a smooth function (subscript 3) not containing them. The authors

Card 1/4

5/60, '62/CSC/SEC/SCA/18  
B1C2/B186

Spatial and angular...

start from the transport equation

$$\frac{\partial \psi(r-sn, n)}{\partial s} + \frac{v}{r} \psi(r-sn, n) = -\lambda(r-sn, n) s^{1/\alpha-1} \quad (1)$$

which can be written as  $\underline{L}_1(r, \omega) \psi(r, \omega) = -\lambda(r, \omega) s^{1/\alpha-1}$  if the spatial

$\underline{L}_1 = v \frac{\partial}{\partial r} + \frac{(1-\alpha)^2}{r} \frac{\partial^2}{\partial \theta^2} + v t$  is introduced that represents the differential part of the transport operator. The integro-differential equations for the above mentioned summands of

$$\psi(r, \omega) = \psi_0(r, \omega) + \psi_1(r, \omega) + \psi_2(r, \omega) + \dots \quad (2)$$

are derived and  $\psi' = \psi_1 + \psi_2 + \dots$  leads to

$$\underline{L}_1' \psi(r, \omega) = -\lambda(r, \omega) s^{1/\alpha-1} = \frac{v}{4\pi r} \psi(r, \omega) \quad (3)$$

where  $n = nr/r$ ,  $\omega_0 = \omega n$ , and  $s^{1/\alpha-1}$  is the macroscopic scattering power; the section through the angle  $\theta$ ; the vector  $\hat{o}$  gives the direction of the

Card 2/4

Spatial and angular...

5/56; 62/600/600 100 1/2  
3102/3136

neutron motion. In order to overcome the difficulties due to the singularities arising as  $r \rightarrow 0$  and  $r \rightarrow 1$ , certain functions

$$\alpha_1(r, \mu) = L_{11} - \frac{4\pi}{4\pi} \epsilon_0(r, \mu') s(\mu_0) d^{-1}, \quad (13)$$

$$\alpha_2(r, \mu) = L_{12} - \frac{4\pi}{4\pi} \epsilon_1(r, \mu') s(\mu_0) d^{-1}, \quad (14)$$

are chosen which have no singularities as  $r \rightarrow 0$  and  $r \rightarrow 1$  and which play the role of additional sources in the equations

$$\begin{aligned} L_{11}(r, \mu) &= \alpha_1(r, \mu') s(\mu_0) d^{-1} \\ &- \frac{4\pi}{4\pi} \epsilon_2(r, \mu') s(\mu_0) d^{-1} - \alpha_2(r, \mu) = \alpha_1(r, \mu) \end{aligned} \quad (15)$$

Thus,  $\alpha_1$  compensates the deviations of  $\epsilon_1$  and  $\epsilon_2$  from the exact distributions  $\epsilon_1'$  and  $\epsilon_2'$  and (12) has the solution  $\epsilon(r, \mu) = \alpha_1(r, \mu) + \alpha_2(r, \mu) + \epsilon_1(r, \mu)$ .

After the singularities 1 and 2 have been separated, (15) is replaced by

$$L_{11}(r, \mu) = \alpha_1(r, \mu') s(\mu_0) d^{-1} = \alpha(r, \mu) \quad (15')$$

Card 3/4

Spatial and angular...  
and

- 10 - Oct 1968  
Block 556

$$\psi(r, \mu) = \sum_{l=0}^{\infty} \frac{(-1)^{l+1}}{4\pi} \sin l\alpha f_{0l}(r) + \frac{e^{-\mu r}}{4\pi r^2} = Lf_0(r, \mu) \quad (24)$$

$$c_l = \frac{2\pi}{\omega} \int_0^{2\pi} \sin lr_1 d\alpha, \quad f_{0l} = \frac{4\pi}{\omega} \int_0^{2\pi} f_0(r, \mu) r_1 d\alpha$$

holds for the source. An approximate solution of (15') for a homogeneous medium in spherical geometry can be easily obtained by the method of spherical harmonics. There are 2 figures.

Card 4/4

PETROV, Emil, inzh.

Generation of harmonic components of the current for nonlinear consumers of an electric power system. Elektroenergija 13 no.12: 2-5 D '62.

PETROV, Evgeni

Introduction of the cadastre in Bulgaria. Selskostop  
nauka 2 no. 3/4 29'-30' '63.

PETROV, Evt.

Apropos of surgical management of heparin therapy of material thrombosis. Khirurgika (Sofia) 1985:5:7-521 1, c.

1. Katedra po spetsialnaya khirurgii (po vodite) - dr f. Alb. Lukarov), Institut z spetsializatsiya i usavrshhenstvovaniya na bolshite, Sofia.

PETROV, F., Geroy Sotsialisticheskogo Truda, prof.

We have many reasons to be proud of our party. Komm. Vooruzh.  
Sil 2 no.19:49-50 C '61. (MIRA 14:1)

1. Chlen Kommunisticheskoy parti: Sovetskogo Soyuza s 1906  
goda.

(Communist Party of the Soviet Union)

PETROV, F., Geroy Sotsialisticheskogo Truda

A new era in the peoples' life. Sov. profsoiuzy 17 no. 21:5-6  
N '61. (MINA 14:16)

1. Chlen Kommunisticheskoy partii Sovetskogo Soyuza s 1896 g.  
(Communism)

PETR V. Fedor Grigor'yevich; PERVYSHOV, Nikolay Arsen'evich  
DARYR SHY, F.S., rec.

On the left to a tractor trailer, "Mitsubishi",  
"Kirovskoe khizhne izdat", etc., etc.

KREMLIN, Moscow, Soviet government; DOKHLOV, A.B.; PESKOV, V. I.

PSM: tentatively identified as leader of KGB party organization, Moscow, Russia -4 At 100.

• Moscow's eye-witnesses identified by name, but not  
by their -USA contacts. In this case, they are not  
the same individuals.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

ESTEV, F.

In an Cuban mining town - Nov. night, 10 months to '61.  
GIRL 1.14  
After additional wires

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

L 35437-65 EPP(c)/EPR/EWP(j)/EWI(m)/T/ PC-4/PR-4/PS-4 BM/WW

8/0317/64/000/002/0064/0065

ACCESSION NR: AP5008829

AUTHOR: Petrov, F. (Lieutenant colonel)

32

TITLE: Fiber glass reinforced plastics 5

31

SOURCE: Tekhnika i vooruzheniye, no. 2, 1964, 64-65

B

TOPIC TAGS: fiberglass, plastic industry, plastic technology

ABSTRACT: Plastics reinforced with fiber glass are most commonly made of polyester resins. They are easily worked, harden without pressure, and show good physico-chemical properties. However, their high shrinkage under changing external conditions causes them to separate from the reinforcement, develop cracks, and weaken considerably. Epoxy resins adhere well to the reinforcement, resist water and chemicals, and exhibit fine dielectric properties. Low-pressure phenolic resins are weaker and less cohesive, but show a good thermal stability. Melamine resins, used in combination with other materials, impart hardness, low solubility, thermal stability, good dielectric properties, and the ability to take on colors. Organosilicon resins, developed recently by K. A. Andrianov, are being applied to electrical technology. They resist temperatures up to 500° without losing

Card 1/2

L 35437-65

ACCESSION NO: AF5008829

strength. In this respect the polyurethane plastics are even more desirable. Some properties of reinforced plastics exceed even those of steel, so that plastics are being used to replace metals in various types of machinery.

ASSOCIATIONS: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MR

NO REP SOV: 000

OTHER: 000

Card 2/2

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

ERICOV, F.N., prof.

For the influence of economic factors on political  
and social processes  
(Russia--Economic policy)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

PETROV, F.N.

Forever with us. Nauka i zhizn' 27 no. 4:35-37 Ap '60.

(MIRA 14:5)

(Lenin, Vladimir Il'ich, 1870-1924)

PETROV, F.N., chlen Kommunisticheskoy partii Sovetskogo Soyuza  
s 1896 goda

It is a high honor to be a member of the CPSU. Komm. Vooruzh.  
Sil 4 no. 19:43-50 O '63. (MIRA 17;7)

PETROV, F.N., chlen Kommunisticheskoy partii Sovetskogo Soyuza s 1896 goda,  
Geroj Sotsialisticheskogo Truda

Following Il'ich's legacy. NTO \* no.4:5-7 Ap '63. (MIRA 16:3)  
(Lenin, Vladimir Il'ich, 1870-1924)

BAKLEV, A.N., glav.red.; PETROV, F.N., glav.red.; BRUSILOVSKIY, L.Ya.,  
red., KON, M.A., st. muzich. red.; VASIL'EVANTS, S....,  
muzich. red.

[Popular medical encyclopedia] Popular'naya meditsinskaya  
 entsiklopediya. Glav. red. Baklev i F.N. Petrov. Glav.  
 red. na russk.: L.I.A. Brusilovskiy. I. tr. i uchln. sovet izd.:  
 Aleksandrov I. tr. po ktn., Izd-v "Ljeteskaya entsiklo-  
 pediya," 1952. 11.5 v. o form.

(MIA 17:6)

BAKULEV, A.N., glavnnyy red.; PETROV, F.N., glavnnyy red.; MILOVIDOV, B.M., zam. glavnogo red.; BRUSILOVSKIY, L.Y., red.; DOMAROVSKAYA, Yu.P., red.; ZELENIN, V.P., red.; KRASNOV, M.L., red.; KRISTMAN, V.I., red.; MAYSTRAKH, K.V., red.; MALINOVSKIY, M.S., red.; MASHKOVSKIY, M.D., red.; MUL'TANOVSKIY, M.P., red.; SNEZHNEVSKIY, A.V., red.; SOLOV'YEV, V.D., red.; CHERKINSKIY, S.N., red.; KON, M.A., staryshiy nauchnyy red.; VOSKAN'YANTS, O.I., mладшиy red.; KOSTI, S.D., tekhn.red.

[Popular medical encyclopedia] Pamyatnaya meditsinskaia entsiklopediya. Chlev.red.A.N.Bakuler i F.N.Petrov. Chleny red. kollegii: L.IA.Brusilovskii i dr. Nauchn.sovet izd-va: A.P.Aleksandrov i dr. Moskva, Gos.nauchn.izd-vo "Sovetskaya entsiklopediya," 1961.  
1252 columns.

(MIRA 14:4)

1. Redaktsiya meditsiny i zdorovookhraneniya. Moskva, Zh-28,  
Pokrovskiy bul'var, d.8, Gosudarstvennoye nauchnoye izdatel'stvo  
"Sovetskaya Entsiklopediya" (for Milovidov, Kon, Voskan'yants).  
(MEDICINE--DICTIONARIES)

S/026/61/000 CIA RDP86  
DOIT D.15

AUTHOR Petrov, F.N., Professor

TITLE To the benefit of war

INITIAL PUBLICATION DATE 1961

After reviewing Soviet economic development plans for the period 1961-1965, the author describes plans for industrial, social and material development in the 1961-65 period as outlined at the 17th CPSU Congress. The rate of industrial production will be increased 4 times and the total output of agriculture 1.2 times. The electrification of the country will be completed and a 700 billion kw/hrs of power generated annually. A rapid increase in metal and fuel output will result in approximately 200 million tons of steel being smelted annually and enough coal, gas and petroleum being produced to meet the needs of the national economy. New power bases are to be established on the Angara and Yenisey Rivers, and new metallurgical bases are to be set up in the area of the Kursk Magnetic Anomaly and in Kazakhstan. The petroleum base in the Far East will

In the benefit of war

Information  
DOD/POL

1. In 1945 the building and the ministries are to be further developed in the Kuzbass area, the Urals, the Northern Caucasus and Western Siberia. A unified deep-water system will amalgamate the waterways of the European USSR and be established. The rail network will increase 11 times in length and capacity by 1945. The industrial output and income will rise by more than 4.5% during the period 1945-1950. A 40-hour working week will be introduced. An important material improvement offered to the Soviet people is the flat ration and free meals.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5

WALKER, A. L., Jr. [REDACTED]

ENCL 1x Operational Control, [REDACTED]  
[REDACTED] [REDACTED]

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420012-5"

PETROV FP

11G

The sedimentation velocity of erythrocytes in electrical and inhalation anesthesia. D. V. Lopushina, I. P. Petrov and N. I. Uspenskaya. Tr. Akad. Nauk SSSR 41 No. 1, 100-106, 1960. The sedimentation velocity was studied in the blood of patients anaesthetized electrically (Leriche's method), resined (1907, 1920, see also Segundo, 1947, 1954) and by inhalation of ether,  $\text{CHCl}_3$  and by means of morphine. The old method showed that in ether and in both forms of the passage of the current through the body, afterwards, the retardation being inversely proportional to the duration of the anesthetic. In the series of application of the current the increase of the duration of respiration, the decrease of the use of ether and the increase produced a very small retardation effect, while  $\text{CHCl}_3$  and ether caused no retardation. Ether reacts specifically with morphine combining specifically with  $\text{CHCl}_3$  and ether, and with the anesthetic.

PETROV, F P

II-H

Effect of insulin on the nervous system A. A. Glazov  
and F. P. Petrov (Skvortsov-Stepanov Hosp., Lenin  
grad). *Bull. Akad. Med. U.S.S.R.* 11, 291-3  
1941. In frog sciatic-gastrocnemius prepns. insulin  
produced a block of the paralytic nature, removed by a  
direct current anode, and intensified by the cathode.  
Insulin applied directly to cut surface of spinal cord in  
increased the latent period of the reflex. Adrenaline, under  
similar conditions, decreased the latent reflex period and  
removed the insulin-induced block G. M. K

PETROV, F.P.; VASIL'YEV, L.L., zaveduyushchiy.

Effect of a low-frequency electromagnetic field on the higher nervous activity.  
Trudy Inst.fiziol. 1:369-375 '62.  
(Mild effect)

1. Laboratoriya obshchey nervno-myshechnoy fiziologii.  
(Nervous system) (Electromagnetism)

PETROV, F. I.

USSR Medicine - Physiology

FD 249

Card 1 1

Author : Petrov, F. I.

Title : Action of the electromagnetic field of low frequency on muscular tissue

Periodical : Fiziol.zhur., v. 51 - 1, Mar-Apr. 1964

Abstract : The ungrounded gastrocnemius muscle of frogs can be stimulated by an electromagnetic field of low frequency (at 10 cycles per second). Curarization, however, decreases this effect. The thinner the muscle is, the lower is the degree of stimulation and vice versa. Five illustrations. Seven Soviet references.

Institution : Laboratory of General Neuro-Mechanisms, Institute of Physiology imeni I. I. Pavlova, Academy of Sciences USSR

Submitted : April 12, 1963

PETROV, P.P.

Electrotonic elimination of the pessimal state. Trudy Inst. fiziol.  
6:24-79 '57. (MIRA 11:4)

1. Laboratoriya obshchey nervno-myshchnoy fiziologii (zaveduyushchiy  
L.L. Vasil'yev).  
(MUSCLE)

PETROV, F.P., inzh.

The D-390 shuttle-type roller with drop weights. Stroili dor.  
mashinostr. 5 no.3:1)-16 Mr 60. (MIRA 1:6)  
(Rollers (Earthwork))

AID P - 5425

Subject : USSR/Aeronautics - tactics

Card 1/1 Pub. 135 - 2/31

Author : Petrov, E. S., Lt. Col.

Title : Interception at low altitudes with the use of vertical maneuver.

Periodical : Vest. vozd. flota, 1, 8-11, Ja 1957

Abstract : This article describes how the interception of a bomber and getting into the initial position of attack is carried out by fighters with the use of vertical maneuvers at a low altitude. Three diagrams, 1 table. The article merits attention.

Institution : None

Submitted : No date

PETROV, P. (Irkutsk).

On a new basis. Sov. radioizoty / no. 1173 Mz 19.  
(Irkutsk--Mica)

(MIR 11:3)

PETROV, Fedor Grigor'yevich, kand.tekhn.nauk; KUKLIN, P.V., red.; ZIBROVA, .  
~~K.D.~~, tekhn.red.

[The setting of work norms, and wages] Normirovanie truda i  
zarabotnaia plata. Stalingradskoe knizhnoe izd-vo, 1957. 31 p.  
(V pomoshch' izuchaiushchim ekonomiku, no.9) (MIRA 12:4)  
(Wages) (Production standards)

PETROV, P.G., kand. tekhn. nauk.

Economic reasons for using special machine-tool attachments. Test.  
(MIRA 11:1)  
mesh. 38 no.2:69-72 1958.  
(Machine tools--Attachments)